

PROPOSED

[Issuance Date]

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

04-XXxE CAB
File No. 0240

Mr. Thomas C. Simmons
Vice President, Operations and Maintenance
Hawaiian Electric Company, Inc.
P. O. Box 2750
Honolulu, Hawaii 96840

Dear Mr. Simmons:

Subject: Covered Source Permit (CSP) No. 0240-01-C
Minor Modification Application No. 0240-03
Hawaiian Electric Company, Inc.
Six (6) Boilers and Two (2) Black Start Diesel Engine Generators
Located at: Kahe Generating Station 89-900 Farrington Highway,
Waianae, Oahu
Date of Expiration: September 16, 2007

The subject Covered Source Permit is amended in accordance with Hawaii Administrative Rules, Title 11, Chapter 60.1. The issuance of this permit amendment is based on the plans, specifications, and information that you submitted as part of your application for minor modification received on August 25, 2004; and revisions to the application submitted September 28, 2004. This permit amendment clarifies the heat input rate limit as an averaging period and the hour limitation for NO_x (as NO₂) emissions during start-up. A receipt for the minor modification fee of \$200.00 is enclosed.

The amendments do not increase any air pollutant emissions nor relax any permit conditions.

Special Condition No. C.b. in Attachment II, issued with CSP No. 0240-01-C dated September 17, 2002, is amended as follows:

C.b. Unit No. 6 Limits for NO_x (as NO₂) During The NO_x Start-up Period

C.1.b.i.

The "NO_x start-up period" shall be the period of time when the first ignitor/burner of the boiler is lighted until the boiler's subsystems are brought online and stability is attained for normal operation; or when the boiler is initially brought up to 32% load (45.5 MW), whichever occurs first.

C.1.b.ii.

The NO_x start-up period shall not exceed thirty-six (36) hours and shall exclude the time when the boiler is not combusting fuel.

C.1.b.iii.

The total number of NO_x start-up hours shall not exceed six-hundred (600) hours in any 12-month rolling period.

C.1.b.iv.

During the NO_x start-up, as defined in Special Condition No. C.1.b.i., the heat input rate of Unit No. 6 shall not exceed 433.5 MMBtu/hr (3-hour rolling average).

C.1.b.v.

Any relaxation of limits specified in C.1.b.iii. and iv. that increases the potential to emit above the applicable PSD threshold will require a full PSD review of the source as though construction has not yet commenced on the source.

Special Conditions No. D.1.b.ii and iii in Attachment II, issued with CSP No. 0240-01-C dated September 17, 2002, are amended as follows:

D.1.b.ii. Hour Limitation for NO_x (as NO₂) Emissions During Start-up

The DAS shall record the number of hours for NO_x start-up periods, as defined in Special Condition No. C.1.b.i. The following records for NO_x start-up hours shall be kept for the boiler:

- (1) The date, start and end times for each NO_x start-up period;
- (2) Total number of start-up hours with NO_x emissions on a monthly and 12-month rolling basis.

D.1.b.iii. Heat Input Rate

(1) Heat Input Rate Calculation

The DAS shall use fuel flow data from the electronic mass fuel meters and calculate the heat input rate during the NO_x start-up period (Special Condition No. C.1.b.i.) for compliance with Special Condition No. C.1.b.iv. The heat input rate shall be continuously monitored and determined as follows:

Heat input rate, MMBtu/Hr. = (fuel flow rate) x (heat content of fuel oil no. 6)

The heat input rate shall be calculated on a three-hour average.

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Monitoring report form: *Boiler "Start-up"* issued with CSP No. 0240-01-C dated September 17, 2002, is also amended to facilitate monitoring with the proposed amendments. The revised monitoring report form is attached.

All other permit conditions issued with CSP No. 0240-01-C dated September 17, 2002, shall not be affected and shall remain valid.

Sincerely,

THOMAS E. ARIZUMI, P.E., CHIEF
Environmental Management Division

CI:lk

Enclosures

c: CAB Enforcement Section

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**MONITORING REPORT FORM
BOILER "NO_x START-UP"
COVERED SOURCE PERMIT NO. 0240-01-C
(PAGE 1 OF 2)**

[Issuance Date]

Expiration Date: September 16, 2007

In accordance with the Hawaii Administrative Rules, Title 11, Chapter 60.1, Air Pollution Control, the permittee shall report to the Department of Health the nature and amounts of emissions.

(Make Copies for Future Use)

For Period: _____ Date: _____

Facility Name: _____

Equipment Location: _____

Equipment Description: _____

Equipment Capacity/Rating (specify units): _____

(Units such as Horsepower, kilowatt, tons/hour, etc.)

Serial/ID No.: _____

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Department of Health as public record.

Responsible Official (PRINT): _____

TITLE: _____

Responsible Official (Signature): _____

BOILER, UNIT NO. 6

MONTH	TOTAL NO _x Start-Up Hours	ROLLING 12-MONTH BASIS	NOTES
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			
TOTAL			

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**MONITORING REPORT FORM
BOILER "NO_x START-UP"
COVERED SOURCE PERMIT NO. 0240-01-C
(CONTINUED, PAGE 2 OF 2)**

[Issuance Date]

Expiration Date: September 16, 2007

BOILER UNIT NO.: _____			MONTH: _____		
Date	¹ Start Time	² End Time	³ NO _x Start-up Hours	⁴ Boiler Load (MW)	⁵ Heat Input (MMBtu/Hr)
TOTAL MONTHLY HOURS					

¹ During a start-up, the recorded start-time shall be noted as the first burner being lighted.² Time when start-up ends which occurs when the boiler's subsystems are brought online and stability is attained for normal operation; or when the boiler is initially brought up to 32% load.³ Total time (hours) with NO_x emissions as monitored by the Data Acquisition System (DAS). The hours may not necessarily reflect the time difference between the "End-time" and "Start-time" since DAS does not record hours for NO_x emissions when boiler is not combusting fuel.⁴ Load at end of start-up.⁵ Highest 3-hour average heat input during NO_x start-up period.

Indicate the highest heat content of fuel oil no. 6 received for this report period: _____

Did any of the fuel oil no. 6 receipts exceed 0.152 MMBtu/gal: ☐ YES ☐ NO

If yes, complete the following table:

Date Received	Supplier's Heat Content	Date of Sample	HECO's Heat Content Analysis